

REMARKS

In this response, Claims 1, 3-6, 13, 18, and 20 have been amended to delete the recitation of "wherein the sidewall and bottom wall are not printed circuit boards" and to further recite that the operation control button is connected to the claimed control device. In addition, Claim 18 was amended to specify that the claimed recess is defined in the top surface of the bicycle control device, and Claim 13 was amended to correct a typographical error with respect to the word "within."

No claims have been added or cancelled. Accordingly, claims 1 and 3-27 remain pending in the present application. Reconsideration of the above-identified patent application is hereby requested.

Rejection of Claims 1 and 3-27 Under 35 U.S.C. § 112,

Paragraph 1

The Examiner has rejected Claims 1 and 3-27 under the written description requirement of 35 U.S.C. § 112, para. 1. The Examiner first contends that the "applicant added the limitation that the side wall and bottom wall are not printed circuit boards," and that this limitation is a negative limitation that was not properly supported by the originally-filed specification. It should be noted that this limitation was added by amendment nearly two years ago, in July 2003. Only now, after the filing of two appeal briefs, has the Examiner contended that the limitation fails to satisfy Section 112. Nevertheless, in order

to expedite the allowance of the application, Applicant has canceled this limitation from all pending claims. Thus, this basis of the Examiner's written description rejection is believed to be moot.

The Examiner further contends that Applicant's recitation of a control button movable within a switch mounting recess fails to satisfy the written description requirement. She specifically asserts that "the specification does not provide support for how the button is movable within the recess." Office Action at 3. First, Applicant amended its claims to specify that the control button is movable within the switch mounting recess in January 2003. Until now, at no time has the Examiner contended that this limitation does not satisfy the written description requirement.

Second, the basis of the Examiner's rejection is inconsistent with the pending claims. The pending claims do not recite how the switch is movable within the recess. They merely recite that the switch is movable within the recess. The test for sufficiency of support in an original application is "whether the disclosure of the application relied upon reasonably conveys to the artisan that the inventor had possession at that time of the later claimed subject matter." See Wang Laboratories, Inc. v. Toshiba Corp., 993 F.2d 858, 865 (Fed. Cir. 1993) (citations omitted) (emphasis added). Applicant's claims do not recite

limitations concerning how the switch is movable. On this basis alone, the rejection is improper and should be withdrawn.

Third, the originally-filed application conveys to one of ordinary skill in the art that the inventor was in possession of the claimed invention at the time the application was filed. The originally-filed specification describes a "control switch 40," which in the preferred embodiment of Figures 3-7 comprises an operation control button. As one of ordinary skill in the art would readily recognize, in Applicant's preferred embodiment, the button has to move in the recess 42 in order to function as a control switch. Moreover, the originally-filed application describes embodiments which require the use of "a thumb to operate . . . control switch 40" as well as embodiments in which "the control switch 40 is located on the control device 20 at a location that is conveniently accessible by the rider's index finger." Original Application at page 5, lines 27-34. Again, one of ordinary skill in the art would readily recognize that in order for the rider to actuate the switch with a thumb or index finger, the switch has to be movable in the recess. Thus, regardless of whether the text of the original specification expressly describes the switch as being movable in the recess, one of ordinary skill in the art would recognize that a movable switch was disclosed. See Wang Laboratories, 993 F.2d at 866 (holding that the drawings alone were sufficient to support a later filed claim amendment).

Rejection of Claims 1 and 3-27 Under 35 U.S.C. § 112,

Paragraph 2

The Examiner next contends that Claims 1 and 3-27 are indefinite under 35 U.S.C. § 112, para. 2. According to the Examiner, Applicant's recitation of a control button movable within a recess "is unclear, as the movement of the button within the recess is not clearly defined." Office Action at 3. More specifically, the Examiner states that "the button could be moveable only during assembly/disassembly or during operation of the button to perform a function." Office Action at 3. Again, this limitation has been included in the pending claims for two years. Yet despite having issued three substantive Office Actions and two Advisory Actions since then, the alleged "indefiniteness" has not been raised until now. Nevertheless, in an effort to expedite the allowance of the application, Applicant has amended Claims 1, 3-6, 13, 18, and 20 to further specify that the operation control button is connected to the bicycle device. Thus, as amended, the claims recite that the button is connected to the device and movable within the claimed recess. It is believed that this amendment is sufficient to overcome the newly-alleged indefiniteness.

Rejection of Claims 1, 3-6, 9-11, 13-17, 20, 23-25 and
27 Under 35 Under 35 U.S.C. § 102(b) as Anticipated by
Abe

The Examiner has rejected Claims 1, 3-6, 9-11, 13-17, 20, 23-25 and 27 as anticipated by Abe, U.S. Patent No. 6,073,370. According to the Examiner, Fig. 11 of Abe discloses an integrated bicycle control device for holding a computer switch, comprising "a casing (38) encompassing the brake/shift control device wherein the casing defines a recess therein, the recess having a bottom wall (31) and side wall (38) wherein the recess has a shape conforming to the outer periphery of the operation control button 54" Office Action at 4.

Claims 1, 3, 4, 18, 20, and 23-25 recite that the claimed control device has a "top surface *defining* a recess therein, the recess having a bottom wall and a sidewall connected to the bottom wall." Similarly, Claims 5, 6, 9-11, 13-17, and 27 recite that the control device has a "casing defining a switch mounting recess therein, the recess having a bottom wall and a sidewall connected to the bottom wall." These limitations are not disclosed in Figure 11 or elsewhere in Abe. In Figure 11, Abe depicts a cross-sectional view of an alternate embodiment of his switch wherein "the leg of a push button 35a encircles the start switch 54, thus eliminating the need for push button guide members 33 and 34." Abe at 6:52-59. Other than this modification, there is no indication that the embodiment of

Figure 11 differs from the embodiment of Figure 3. As both Figures 3 and 11 indicate, Abe's casing 38 has through-holes. Neither casing 38 nor the top surface of brake and shifting device 1 defines a recess that has a bottom wall and a sidewall connected to it. Instead, the alleged "recess" is formed by the through-hole in casing 38 and printed circuit board 32. As a result, Abe does not disclose the limitations of Claims 1, 3-6, 9-11, 13-17, 20, 23-25 and 27, and therefore, cannot anticipate them.

Rejection of Claims 7 and 21 Under 35 U.S.C. § 103(a)

Based on Abe and Seimitsu

The Examiner has rejected Claims 7 and 21 as obvious under 35 U.S.C. based on the combination of Abe and Seimitsu, JP 20026893. Claims 7 and 21 depend from claims 6 and 20, respectively, and they further recite the attachment of the claimed switch in the switch mounting recess by an adhesive. The Examiner has applied the combination of Abe in the same manner described above for claims 1, 3-6, 9-11, 13-17, 20, 23-25 and 27. As such, claims 7 and 21 are allowable for the same reasons that claims 6 and 20 are allowable over Abe.

The rejection is further improper because Seimitsu is non-analogous art, and its combination with Abe is not motivated or suggested by the prior art. Seimitsu is a Japanese Patent Application for which the Examiner has supplied an English-language abstract. According to the Examiner, Seimitsu "teaches

using an adhesive to attach a portable clock to a fixed base." Office Action at 5. She further asserts that "it would have been obvious to one of ordinary skill in the art at the time the invention was made to attach the control switch to the switch mounting recess using an adhesive so as to provide a secure connection between the switch and recess." Id.

First, Seimitsu is non-analogous art. "In order to rely on a reference as a basis for rejection of the applicant's invention, the reference must either be in the field of the applicant's endeavor or, if not, then be reasonably pertinent to the particular problem with which the inventor was concerned." In Re Oetiker, 977 F.2d 1443, 1447 (Fed. Cir. 1992). Seimitsu concerns the use of an adhesive to fix a vibration damper to a transparent base used in the liquid crystal panel of electronic devices such as a clock and telephone. It does not address control switches or techniques for mounting or attaching them. Thus, combining Seimitsu with Abe is improper. The Examiner contends that Seimitsu "was concerned with the attachment of an electronic device to a base," and therefore, that it is analogous. However, this broad characterization of Seimitsu's disclosure does not indicate that it is "reasonably pertinent to the particular problem" with which the present application is concerned. See In Re Oetiker, 977 F.2d at 1447 (emphasis added). Indeed, the Oetiker court rejected an examiner's contention that garment fasteners were reasonably pertinent to the applicant's problem of fastening hose clamps, Id. at 1447, even though one

could broadly characterize each of them as broadly related to connecting discrete articles. Here too, the problem of attaching vibration dampers to phones or clocks bears too little relation to the problem of attaching switches to bicycle control devices to be "reasonably pertinent."

Second, Abe's disclosure belies the Examiner's obviousness contention. The Examiner contends that "using an adhesive to attach one member to another is old and well known in the art" Office Action at 5. However, Abe does not suggest the desirability of using an adhesive to attach his switches to a switch mounting recess. If the prior art had in fact disclosed the desirability of using an adhesive to attach a control switch in a switch mounting recess, Abe would have made use of the technique as well. Thus, the Examiner has selectively extracted individual elements of the claimed invention from the prior art, without any basis in the prior art for doing so. See In Re Laskowski, 871 F.2d 115, 117 (Fed. Cir. 1989).

Rejection of Claims 8 and 22 Under 35 U.S.C. § 103(a)

Based on Abe and Miyoshi

The Examiner has rejected Claims 8 and 22 as obvious under 35 U.S.C. § 103(a) based on the combination of Abe and Miyoshi, et al., JP 04-048521. Claims 8 and 22 depend from Claims 6 and 20, respectively, and further recite a hole in the bottom surface of the switch mounting recess and an elastic

attachment arm on the operation control button, wherein the attachment arm is press fitted into the hole. Thus, claims 8 and 22 are allowable for the same reasons that claims 6 and 20 are allowable over the prior art.

In addition, Miyoshi cannot be combined with Abe to obtain the elastic attachment arm feature recited in claims 8 and 22. Miyoshi is a Japanese Patent Application for which the Examiner has provided an English-language abstract. According to the Examiner, Miyoshi discloses a "switch mounting recess defining a hole (9a, b) therein, the control switch 12 having an attachment arm 13 made of an elastic material, wherein the attachment arm is press-fitted into the hole of the switch mounting recess." Office Action at 6. Contrary to the Examiner's assertion, Miyoshi discloses a button 12 that engages a spring 13. The spring 13 is not an "attachment arm" of the button 12, as the Examiner contends. Spring 13 appears to extend into hole 9a. However, the abstract does not describe the arrangement.

The Examiner contends that Miyoshi's spring is inherently elastic" and that it is "used to attach the button (12) to a base." Office Action at 9. However, nothing in the translated abstract or the figures indicates that the spring "attaches" button 12 to the base. Instead, it merely appears that it biases button 12 away from case 6. The abstract states that cover 11 is attached by "fitting a projection 11a of the top

cover 11 to a fitting hole 9b." However, the spring is not described as performing any attachment function and cannot fairly be characterized as an "attachment arm."

The Examiner's assertion of Abe and Miyoshi is an impermissible hindsight reconstruction of the claimed invention. The Examiner indicates that holes 9a and 9b are a "switch mounting recess defining a hole." However, claims 8 and 22 recite a switch mounting recess that defines a bottom wall and which comprises a bottom surface defining a hole therein. At most, Miyoshi shows a hole. It does not, however, show the claimed structure of a recess having a bottom surface defining a hole. Moreover, Miyoshi does not disclose a recess that conforms to the shape of the outer periphery of a control button, as required by the rejected claims. The Examiner defends the assertion of Miyoshi on the grounds that "reconstruction is proper" if it "takes into account only knowledge which was within the level of ordinary skill at the time the claimed invention was made," but she does not demonstrate the alleged source of that knowledge or how it justifies the proposed reconstruction of the references. See In Re Laskowski, 871 F.2d 115, 117 (Fed. Cir. 1989).

Putting aside the issue of reconstructing Miyoshi, the Examiner has not provided a motivation or suggestion *in the prior art* for combining it with Abe to obtain the claimed invention. "When an obviousness determination is based on multiple prior art

references, there must be a showing of some teaching, suggestion, or reason to combine the references." Winner International Royalty Corp. v. Wang, 202 F.3d 1340, 1348 (Fed. Cir. 2000) (citations omitted). See also In re Stencel, 828 F.2d 751, 755 (Fed. Cir. 1987) ("Nor is obviousness established by combining the teachings of the prior art to produce the claimed invention, absent some teaching or suggestion that the combination be made"). The Examiner contends that combining Abe and Miyoshi "would have been obvious . . . so as to provide a more secure and stable form of attachment for the control device switch." Office Action at 6. However, that assertion is unsupported. "The factual inquiry whether to combine references . . . must be based on objective evidence of record." In re Sang-Su Lee, 277 F.3d 1338, 1343 (Fed. Cir. 2002). In Sang-Su Lee the Federal Circuit reversed a Board of Patent Appeals and Interferences finding of obviousness, holding that "[t]his factual question of motivation is material to patentability, and could not be resolved on subjective belief and unknown authority." Id. at 1343-1344. See also Application of Rice, 481 F.2d 1316, 1318 (Fed. Cir. 1973).

Rejection of Claims 12 and 26 Under 35 U.S.C. § 103(a)

Based on Abe and Hill

The Examiner has rejected Claims 12 and 26 under 35 U.S.C. §103(a) as being unpatentable over the combination of Abe and Hill et al. (U.S. Patent No. 5,745,438) ("Hill"). Claims 12

and 26 depend from claims 11 and 24, respectively, and further recite the threaded engagement of a retention ring in the switch mounting recess. Hill discloses an electrostatic transducer and method of manufacturing the same. It does not compensate for the deficiencies of Abe described above with respect to Claims 11 and 24. Thus, Claims 12 and 26 are allowable over the combination of Abe and Hill for the same reasons that Claims 11 and 24 are allowable over Abe.

In addition, the assertion of Hill is improper. The portion of Hill relied upon by the Examiner is a threaded O-ring 16 that mates with a threaded housing 11, thereby retaining an insulating member 17 in a recess 32. Not only is there no motivation or suggestion in the prior art for combining Hill with Abe, but Hill does not involve control switches, or structures for retaining them within recesses. Thus, it is non-analogous art and its assertion is improper. See In Re Oetiker, 977 F.2d 1443, 1447 (Fed. Cir. 1992). The Examiner has broadly characterized Hill's disclosure as related to the problem of "securing a device within a housing," and on that basis, contends that it is analogous. However, she has not demonstrated that the reference is "reasonably pertinent" to the particular problem of attaching a movable switch to a bicycle control device or within a control device switch recess, as required by the standard set forth in Oetiker.

Rejection of Claims 18 and 19 Under 35 U.S.C. § 103(a)

Based on Abe and Chou

Claims 18 and 19 are rejected under 35 U.S.C. §103(a) as being unpatentable over Abe in view of Chou, U.S. Patent No. 5,370,412 ("Chou"). As amended, Claim 18 recites a handlebar assembly comprising a bicycle control device that has a top surface defining a switch mounting recess therein, the switch mounting recess having a bottom wall and a sidewall connected to the bottom wall. As explained above, Abe does not disclose this limitation. Nor does Chou. The Examiner contends that Chou discloses a cycle computer attached to a handlebar, separate from a control device. However, Chou does not disclose the claimed relationship between an operation control button and a switch mounting recess formed in a bicycle control device's top surface. Thus, the claimed references do not disclose all of the limitations of Claim 18 and cannot render it obvious. Claim 19 depends from Claim 18, and therefore, is allowable over the combination of Abe and Chou as well.

CONCLUSION

In view of the foregoing, it is believed that all claims now pending patentably define the subject invention over the prior art of record and are in condition for allowance and such action is earnestly solicited at the earliest possible date.

Respectfully submitted,

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